

In re Patent Application of  
**MARINET ET AL.**  
Serial No. 09/995,258  
Filed: NOVEMBER 27, 2001

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**In the Drawings:**

The attached sheet of drawings includes changes to Figures 1-3 and 3a. Specifically, Figures 3 and 3a have been relabeled as 3a and 3b, respectively. Moreover, Figures 1 and 2 have been amended to correct an informality and to illustrate the gates of transistors  $M_c$ ,  $M_{ref}$  being connected to the ground through a capacitor C. Support for this amendment may be found on page 8, lines 11-13 of the present application. This sheet, which includes Figures 1, 2, 3a, and 3b, replaces the original sheet including Figures 1, 2, 3, and 3a.

**Attachment: Replacement Sheet**

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REMARKS

Applicants thank the Examiner for the careful and thorough examination of the present application, and for correctly withdrawing the previous rejections of the claims.

Applicants thank the Examiner for helpfully pointing out the informalities in the Drawings and Specification of the present application. Applicants have amended the Drawings and Specification to address the aforementioned informalities.

Applicants submit that all claims are patentable, present arguments below supporting such patentability, and respectfully request that the Examiner withdraw all pending rejections and objections, and allow all claims.

I. The Claimed Invention

Independent Claim 17 is directed to a random signal generator. The random signal generator comprises an electronic noise source comprising a folded MOS transistor having a drain-source current with a random component. The folded MOS transistor comprises a drain and a source with a folded channel defined therebetween. The random signal generator further comprises a circuit for generating a digital signal based upon the random component.

Independent Claim 25 is directed to a random signal generator circuit comprising a plurality of the random signal generators of Claim 17, and a logic circuit connected to the plurality of random signal generators for combining the digital signals for generating a digital number. Independent Claim 42 is a method counterpart to Claim 17.

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II. The Claims Are Patentable

The Examiner rejected independent Claims 17, 25, and 42 over Morozumi. Morozumi discloses a solid-state imaging sensor comprising a sensing cell, as depicted in Figures 14a-b. The sensing cell comprises an S-shaped channel region that serves as a photosensitive layer for the imaging sensor and stores photo-excited current. (Col. 10, lines 13-17). As depicted in Figure 18 of Morozumi, the relationship between photosensitive current generated and the corresponding incident light on the imaging sensor cell is substantially linear.

In contrast, independent Claim 17, for example, recites a folded MOS transistor having a drain-source current with a random component. Morozumi does not disclose any source for generating a random signal as in the claimed invention. The imaging sensor of Morozumi depends on predictable currents being generating in the channel of the sensing cell to generate accurate signals relating to the image being sensed. The accompanying circuitry of the imaging sensor produces a predictable and accurate signal from the generated photosensitive current. (Col. 2, lines 63-68).

Indeed, the portion of Morozumi cited by the Examiner recites that "the charge generated in the photo-sensitive member is directly proportional to the incident light, the sequential sampling of the adjacent sensing cells allows for the conversion of photo images into electrical signals." (Col. 3, lines 18-22). Therefore, independent Claim 17 is patentable over the prior art. Independent Claims

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25 and 42 are similar to Claim 17 and are patentable for similar reasons.

Accordingly, it is submitted that independent Claims 17, 25, and 42 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

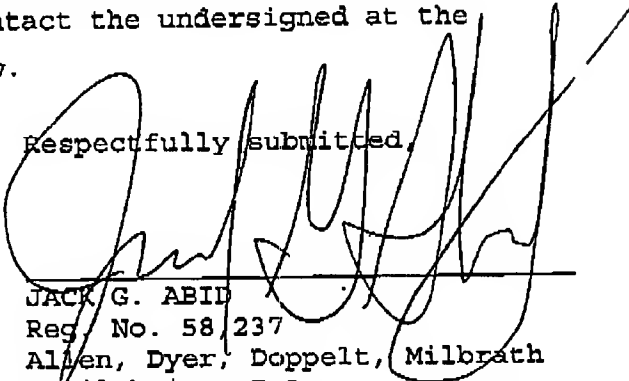
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CONCLUSIONS

In view of the arguments presented above, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 571-273-8300 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this 1<sup>st</sup> day of June, 2007.

